

### KEY BENEFITS SUMMARY

- Certified to the latest European standards EN 1366-3 and EN1366-4, Classified to EN 13501-2:2007, CE Marked to ETAG-026
- Up to 120 minutes fire resistance
- Air permeability testing to 600 Pa
- Acoustics up to 63 dB
- Can be used in Nullifire B747-50 Batt
- Tested with combustible pipes up to 125 mm
- Tested for use in linear gaps up to 20 mm
- Tested with metallic pipes, cables, cable bunches, cable trays and cable ladders

### PRODUCT INFORMATION

#### Description

Nullifire FS705 is a graphite based product which when exposed to fire expands protecting penetrations including cables, cable bunches, cable trays, plastic and metallic pipes. Nullifire FS705 maintains the integrity and insulation performance of the seal through masonry and plasterboard.

#### Usage / Purpose

Nullifire FS705 is designed to close off gaps and penetrations in compartment walls and floors, to provide up to 2 hours fire resistance. This product has been formulated to close off plastic pipe penetrations in the event of a fire, negating the need for pipe closers or wrap systems. FS705 is suitable for the following service penetrations up to 125 mm; PVC pipes, ABS pipes, HDPE pipes including Armaflex and glass wool insulation. Nullifire FS705 can also be used with metallic pipes, cables and cable bunches including telecommunication cables, cable trays and cable ladders.

#### Colour

Grey

#### Packaging

310 ml cartridges (12 per box)

#### Availability

Direct from Nullifire (see back of leaflet for address and telephone details).

### USAGE GUIDELINES

#### Necessary Tools

Skeleton/sausage gun, palette knife and spatula.

#### Preparation

- Ensure that the substrate and penetrating services are compatible with FS705, and that site conditions are within specification. Check that sufficient annular space is available to allow correct installation.
- Clean all surfaces of loose particles, moisture, oils, grease and corrosive materials. We recommend that the surface or substrate temperature be 5°C or above at the time of application. Contact Technical Services for advice regarding lower temperature application.

#### Application

- Mineral wool (min 80kg/m<sup>3</sup>) or PE backing rod can be used as a backer where and if required. Backing material is not required to achieve a correctly installed seal. Nullifire FS705 should be applied around the service on both exposed faces as per the tables as shown in the performance data tables.

#### Installation guide

- Up to 75mm pipe = 10mm annular gap around the pipe minimum.  
Over 75mm pipe = 1/8 of pipe Ø Depth to be 25mm minimum.  
i.e. 110mm pipe Ø divided 8 = 14mm annular gap x 25mm depth
- A circular motion is recommended when installing the sealant to fill the required gap. Nullifire FS705 can be easily built up to effectively fill the annular space with very little wastage or slump. Using

a sharp knife, cut nozzle of cartridge or sausage to bead size and angle required. Gun sealant into gap to required depth by applying an even pressure to the trigger. Tool to a smooth finish immediately with a wet palette knife or spatula.

NOTE: If Nullifire FS705 is exposed to elevated levels of moisture before fully cured, it is likely to be damaged. It is recommended that contact with moisture or condensation during the application and drying of Nullifire FS705 should be avoided.

#### Maintenance

No maintenance required after installation. Routine inspection recommended to ensure no damage.

#### Storage

Store between +5°C and +25°C in dry conditions. Keep away from sources of ignition.

#### Shelf Life

18 months in unopened and stored as indicated.

#### Health & Safety Precautions

Safety data sheet must be read and understood before use.

# FS705

## TECHNICAL INFORMATION

Property	Test Method	Result
Description and Colour		Aqueous Thixotropic Paste - Grey
Density		1.3 g/cm <sup>3</sup>
Viscosity		Thixotropic
Application Temperature		+5°C to 35°C
Flash Point		N/A
Skin Time		15 minutes @ 25°C/ 50% RH
Cure Time		1.7 mm per 24 hrs
Shore Hardness A		68 - ISO 7619-1:2010
pH		8 - 9
Expansion Onset Temperature		180°C
Expansion		Up to 20 times
VOC		18 g/l equivalently 1.2% by weight
Air Permeability		600Pa EN1026 - 100Pa 11.1/16.7 m <sup>3</sup> /h/m <sup>2</sup>
Sound	EN10140:2-2010	up to 63 dB

## PERFORMANCE DATA

Fire performance in accordance with EN1366-3, EN1366-4, Classification 13501 2:2007 + A1: 2009, ETAG-026, Air Permeability EN1026, Sound EN10140:2-2010.

Fire resistance classifications: The following fire protection classes are used: E = integrity, i.e. ability to isolate smoke gases, I = insulation, i.e. ability to prevent heat spread, C = Capped inside furnace, U = Uncapped outside of furnace or U = Uncapped inside of furnace, C = Capped outside of furnace

<b>Nullfire FS705 Penetration Seals Flexible or rigid walls 100 mm thick. FS705 20 mm annulus × 25 mm depth no backing material required.</b>	
PVC Pipe ø 40 mm with 1.9 mm wall thickness.	EI120 C/U
PVC Pipe ø 125 mm with 9.2 mm wall thickness.	EI60 C/U
ABS Pipe ø 40 mm with 1.9 mm wall thickness.	EI120 C/U
HDPE Pipe ø 40 mm with 2.0 mm wall thickness.	EI120 C/U
<b>Nullfire FS705 Penetration Seals flexible or rigid walls 100 mm with insulated plastic pipes.</b>	
Copper/Steel Pipe ø 40 mm with 1.5 mm to 14.2 mm Wall thickness insulated with 32 mm Armaflex.	E120 C/U EI30 C/U
Copper/Steel Pipe ø 40 mm-159 mm with 2.0 mm to 14.2 mm Wall thickness insulated with 32 mm Armaflex.	E120 C/U EI30 C/U
Copper/Steel Pipe ø 159 mm with 2.0 mm to 14.2 mm Wall thickness insulated with 30 mm × 80 kg/m <sup>3</sup> 'pipeline' SGR glass wool tube.	E120 C/U EI30 C/U
<b>Nullfire FS705 Penetration Seals flexible or rigid walls 120 mm thick. Installed on both faces.</b>	
PVC Pipe ø 40 mm with 1.9 mm – 3 mm wall thickness 10 mm annulus × 25 mm deep with no backing material.	EI120 C/U
PVC Pipe ø 125 mm with 4.8 mm – 7.4 mm wall thickness 16 mm annulus × 25 mm deep with 30mm deep 80 kg/m <sup>3</sup> backing material.	EI120 C/U
HDPE Pipe ø 63 mm with 7.2 mm wall thickness 300 mm × 100 mm × 25 mm deep, cables up to ø 21 mm with no backing material.	EI120 C/U
HDPE Pipe ø 90 mm with 9.2 mm wall thickness, 12.5 mm annulus × 25 mm deep with no backing material.	EI120 C/U
ABS Pipe ø 90 mm with 6.0 mm wall thickness, 12.5 mm annulus × 25 mm deep with no backing material.	EI120 C/U

<b>Nullifire FS705 Penetration Seals flexible or rigid walls 120 mm with insulated metallic pipes.</b>	
Copper/Steel Pipe ø 60 mm with 0.8 mm to 14.2 mm Wall thickness insulated with 32 mm Armaflex 20 mm annulus × 25 mm deep with no backing material.	E120 C/U EI90 C/U
Copper/Steel Pipe ø 15 mm with wall thickness 0.8 mm to 7.0 mm insulated with 13 mm Armaflex 15 mm annulus × 25 mm deep with no backing material.	EI120 C/U
<b>Nullifire FS705 Linear Joint Seals Flexible and rigid walls 120 mm max 20 mm gap size</b>	
25 mm depth both sides with PE Backing rod.	EI120
<b>Nullifire FS705 Penetration Seals with Nullifire B747-50 Double Batt installed centrally within flexible or rigid walls 100 mm thick. Installed on both faces 15 mm deep × 15 mm annulus.</b>	
Mild steel or copper Pipe ø 40 mm with 1.5 mm – 14.2 mm wall thickness insulated with 20 mm thick foil faced glass wool insulation (min 80 kg/m³).	E90 U/C EI 60 U/C
Mild steel or copper Pipe ø 40 mm – 159 mm with 1.5 mm – 14.2 mm wall thickness insulated with 30 mm thick foil faced glass wool insulation (min 80 kg/m³).	EI60 U/C
Mild steel Pipe ø 40 mm with 1.7 mm – 14.2 mm wall thickness insulated with 20 mm thick foil faced glass wool insulation (Min 80 kg/m³).	E90 U/C EI 60 U/C
Mild steel Pipe ø 40 mm – 150 mm with 2.3 mm – 14.2 mm wall thickness insulated with 30 mm thick foil faced glass wool insulation (min 80 kg/m³).	EI60 U/C
<b>Nullifire FS705 Penetration Seals with Nullifire B747-50 Double Batt installed centrally within flexible or rigid walls 100 mm thick.</b>	
Electrical Cables up to 21 mm ø	EI60
Electrical Cables 22 mm to 80 mm ø	E60 EI45
Cable Tray and Ladders	EI60
100 mm ø Bundle Telecommunication Cable Type “F”	EI60
Unsheathed electrical cables up to 17 mm ø	E60 EI30
Unsheathed electrical cables up to 18 – 24 mm ø	E60 EI15
Steel or Copper Conduits up to 16 mm	E60 EI15
Plastic conduits up to 16 mm	EI60
<b>Nullifire FS705 Penetration Seals with Nullifire B747-50 Double Batt installed centrally within flexible or rigid walls 150 mm thick.</b>	
Electrical cables up to 80 mm ø	EI60
Cable Trays and Ladders	EI60
100 mm ø bundle telecommunication cable type “F”	EI60
Unsheathed electrical cables up to 24 mm ø	EI60

# FS705

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## Technical Service

Nullifire has a team of experienced Technical Sales Representatives who provide assistance in the selection and specification of products. For more detailed information, service and advice, please call Customer Services on 02476 855000.

## Guarantee / Warranty

This information is offered in good faith but without guarantee or liability. In cases of doubt, users should consult with relevant authority.

Information given herein is supplied for your guidance only and is based upon the results of controlled tests and experience obtained in the application of the product referred to by Nullifire.

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